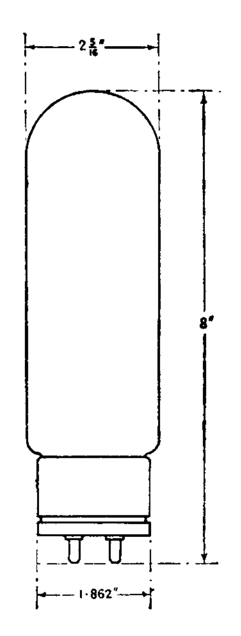
—Standard Valves—

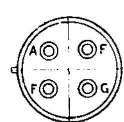
4242-A VALVE

TRIODE.

The 4242-A valve is similar to the 4211-D valve but employs a molybdenum anode and hard glass bulb.

SPECIFICATION.





Cathode.

Thoriated tungsten filament.
Constant voltage type.

Base.

Large 4-pin bayonet.

Dimensions.

Max. overall length	8" (20·4 cms.)
Max. bulb diameter	$2\frac{5}{16}$" (5·9 cms.)
Net weight	0·36 lbs. (164 gms.)

Constants.

Filament voltage	10 volts
Nominal filament current	3·25 amps.
Total emission	1·5 amps.
*Impedance	3,100 ohms
*Amplification factor	13
*Mutual conductance	4·2 mA per volt
Grid–anode capacity	13 $\mu\mu$F.
Anode–filament capacity	4 $\mu\mu$F.
Grid–filament capacity	6·5 $\mu\mu$F.

* *at* V_p = 1,250 *volts*, V_{g1} = —55 *volts.*

LIMITING CONDITIONS FOR SAFE OPERATION.

Maximum direct anode voltage	1,250 volts
Maximum direct anode current	0·150 amps.
Maximum anode dissipation	85 watts
Maximum direct grid current	0·050 amps.
Maximum frequency for above ratings	6 Mc.
Maximum anode voltage for frequency of 30 Mc.	600 volts

Note :—This valve should be mounted so that the plane of the filament is vertical.

—Standard Valves—

TYPICAL OPERATING CONDITIONS.

	Class A AF Amp. and Mod.		
Direct anode voltage	1,250	1,000	volts
Grid bias	—70	—46	volts
Direct anode current	0·060	0·075	amps.
Load impedance	10,000	7,000	ohms
Undistorted output	18	12	watts

	Class B AF Amp. and Mod. For balanced 2 valve circuits.		
Direct anode voltage	1,250	1,000	volts
Grid bias	—80	—55	volts
Anode current per valve—zero signal	0·030	0·030	amps.
Anode current per valve—maximum signal	0·150	0·150	amps.
Anode dissipation	80	70	watts
Load resistance—anode to anode	8,000	6,000	ohms
Maximum output—2 valves	200	160	watts

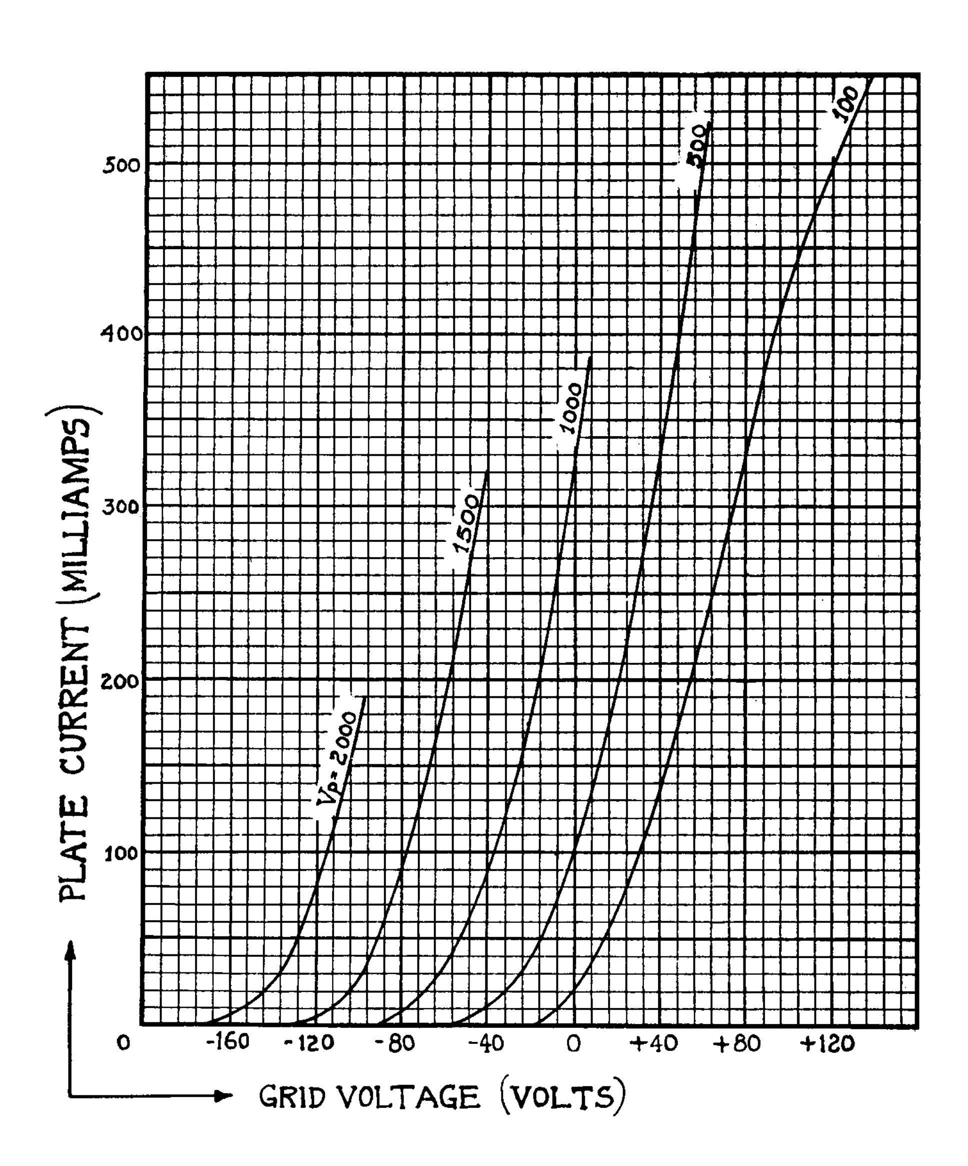
RADIO FREQUENCY OPERATION.

	Class B Telephony		Class C Telephony		Class C Telegraphy		
	Modulated carrier applied to grid		Subject to anode modulation		Unmodulated		
Direct anode voltage	1,250	1,000	1,000	750	1,250	1,000	volts
Direct anode current	0·106	0·130	0·150	0·130	0·150	0·150	amps.
Grid bias	—90	—70	—160	—120	—150 —200	—120 to —160	volts
Carrier output	44	43	100	64	130	100	watts
Anode dissipation	85	85	50	32	58	50	watts

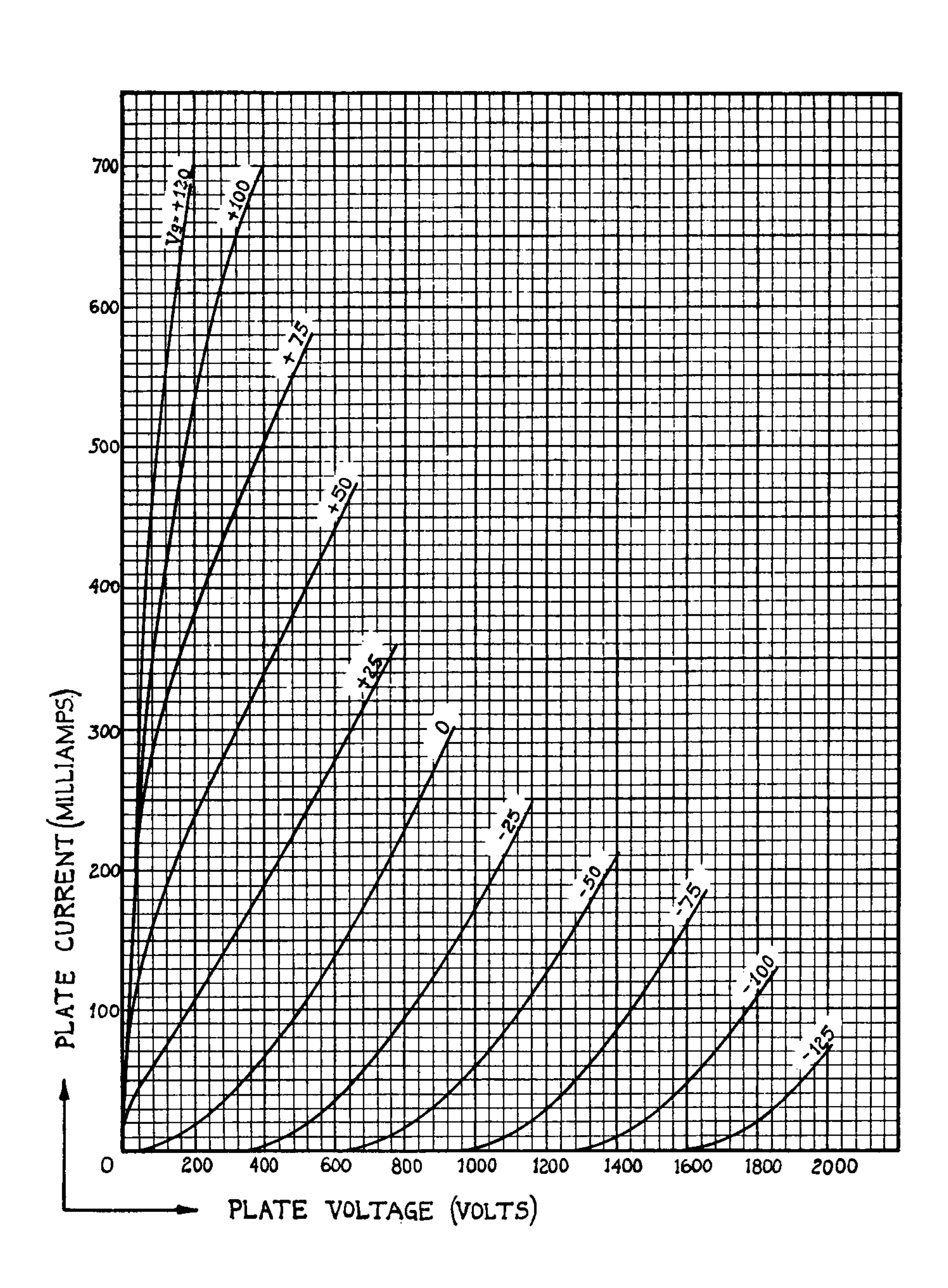
The curves on sheet V.4242-A.2 are taken with A.C. filament heating, grid and anode voltages being referred to the centre point of the filament.

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